## AMENDMENTS TO THE CLAIMS

Please cancel claims 1-20 without prejudice and add new claims 21-41 as follows:

21. (New) A method for compiling object oriented code to produce an application having a reduced size, comprising:

determining a virtual base class of the object oriented code virtually derived by a plurality of classes, each subobject of the plurality of classes comprising a virtual base pointer to a subobject of the virtual base class;

inlining the virtual base class into at least a first class of the plurality of classes; and

compiling the object oriented code to produce the application.

22. (New) The method of claim 21, wherein inlining comprises:

eliminating a virtual base pointer to the subobject of the virtual base class from a memory layout of the first class; and

storing the subobject of the virtual base class in a fixed offset in the memory layout of the first class in which the virtual base pointer was eliminated.

23. (New) The method of claim 21, further comprising:

determining the first class derived from the virtual base class to be duplicated in a second class that inherits from the first class; and

preventing inlining of the virtual base class into the first class.

24. (New) The method of claim 21, further comprising:

determining a third class that inherits from the virtual base class through a set of classes, where each class of the set of classes virtually inherits from the virtual base class; and

inlining the virtual base class into at least a second class of the set of classes.

25. (New) The method of claim 24, wherein the set of classes is a maximal independent set.

26. (New) The method of claim 24, where inlining comprises:

eliminating a virtual base pointer to the subobject of the virtual base class from the memory layout of the second class; and

storing the subobject of the virtual base class in a fixed offset in the memory layout of the second class in which the virtual base pointer was eliminated.

27. (New) The method of claim 24, further comprising:

determining the second class derived from the virtual base to be duplicated in a fourth class that inherits from the second class; and

preventing inlining of the virtual base class into the second class.

28. (New) A method for compiling object oriented code to produce an application having a reduced size, comprising:

removing transitive virtual inheritance from between a virtual base class and a first class inheriting from the virtual base class, wherein the first class inherits non-virtually from a second

class and the second class inherits virtually from the virtual base class, upon determining the presence of transitive virtual inheritance;

removing single virtual inheritance from between the virtual base class and a third class virtually inheriting from the virtual base class, wherein the third class is the only class inheriting from the virtual base class, upon determining the presence of single virtual inheritance;

determining a virtual base class of the object oriented code virtually derived by a plurality of classes, each subobject of the plurality of classes comprising a virtual base pointer to a subobject of the virtual base class;

inlining the virtual base class into at least a fourth class of a plurality of classes virtually derived from the virtual base class; and

compiling the object oriented code to produce the application.

29. (New) The method of claim 28, wherein inlining comprises:

eliminating a virtual base pointer to a subobject of the virtual base class from a memory layout of the fourth class; and

storing the subobject of the virtual base class in a fixed offset in the memory layout of the fourth class in which the virtual base pointer was eliminated.

30. (New) The method of claim 28, further comprising:

determining the fourth class derived from the virtual base class to be duplicated in a fifth class that inherits from the fourth class; and

preventing inlining of the virtual base class into the fourth class.

31. (New) The method of claim 28, further comprising:

determining a seventh class that inherits from the virtual base class through a set of classes, where each class of the set of classes virtually inherits from the virtual base class; and

inlining the virtual base class into at least a sixth class of the plurality of classes that virtually inherit from the virtual base class.

32. (New) The method of claim 31, wherein the set of classes is a maximal independent set.

33. (New) The method of claim 31, wherein inlining comprises:

eliminating a virtual base pointer to the subobject of the virtual base class from the memory layout of the sixth class; and

storing the subobject of the virtual base class in a fixed offset in the memory layout of the sixth class in which the virtual base pointer was eliminated.

34. (New) The method of claim 31, further comprising:

determining the sixth class derived from the virtual base class to be duplicated in a eigth class that inherits from the sixth class; and

preventing inlining of the virtual base class into the sixth class.

35. (New) A method for compiling object oriented code to produce an application having a reduced size, comprising:

removing transitive virtual inheritance from between a virtual base class and a first class inheriting from the virtual base class, wherein the first class inherits non-virtually from a second

class and the second class inherits virtually from the virtual base class, upon determining the presence of transitive virtual inheritance;

determining a virtual base class of the object oriented code virtually derived by a plurality of classes, each subobject of the plurality of classes comprising a virtual base pointer to a subobject of the virtual base class;

inlining the virtual base class into at least a third class of a plurality of classes virtually derived from the virtual base class; and

compiling the object oriented code to produce the application.

36. (New) The method of claim 35, wherein inlining comprises:

eliminating a virtual base pointer to the subobject of the virtual base class from the memory layout of the third class; and

storing the subobject of the virtual base class in a fixed offset in the memory layout of the third class in which the virtual base pointer was eliminated.

37. (New) The method of claim 35, further comprising:

determining the third class derived from the virtual base class to be duplicated in a fourth class that inherits from the third class; and

preventing inlining of the virtual base class into the third class.

38. (New) The method of claim 35, further comprising:

determining a fourth class that inherits from the virtual base class through a set of classes, where each class of the set of classes virtually inherits from the virtual base class; and

7

inlining the virtual base class into at least a fifth class of the plurality of classes that virtually inherit from the virtual base class.

39. (New) The method of claim 38, wherein the set of classes is a maximal independent set.

40. (New) The method of claim 38, wherein inlining comprises:

eliminating a virtual base pointer to the subobject of the virtual base class from a memory layout of the fifth class; and

storing the subobject of the virtual base class in a fixed offset in the memory layout of the fifth class in which the virtual base pointer was eliminated.

41. (New) The method of claim 38, further comprising:

determining the fifth class derived from the virtual base class to be duplicated in a sixth class that inherits from the fifth class; and

preventing inlining of the virtual base class into the fifth class.